Engineering Design Standard

STED Modeling Pressures/Parameters @ Practical Maximum Conditions										
Site	**Boy Scout**	**Davidson**	**Gustina Bear**	**Lyon**	**Miller**	**Milliken**	**Puskarich**	**Ripley**	**Ryser**	**Vozar**
Max % Tank Fill	95%	80%	90%	75%	95%	85%	95%	65%	90%	65%
Out of Service Tanks	0	1	2	0	1	0	2	1	5	0
Oil Volume **bbl/d**	333	62.9	31.6	145	203	64.7	31.2	306	90.8	97.3
Water Volume **bbl/d**	375.4	56.25	15	85	69.17	18.33	27.92	508.75	113.33	37.5
HPS Pressure **psig.**	436	372	270	512	390	292	217	420	427	288
HPS Temp **°F**	60	70	50	40	71.5	50	56	60	86	78
HT Pressure **psig.**	20	20	N/A	22	25	N/A	N/A	19	N/A	20
HT Temp **°F**	130	130	N/A	130	130	N/A	N/A	133	N/A	128
LPS Pressure **psig.**	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LPS Temp **°F**	90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Relief Pressure **osi**	10	16	16	12	12	10	12	12	10	12
Current Combustor	MEVC 100	MEVC 200	MEVC 200	MEVC 100	MEVC 200	MEVC 200	MEVC 200	MEVC 200	MEVC 200	MEVC 200
Model Adjustments	None Required	None Required	None Required	Staggered HT Venting	Staggered HT Venting	Staggered HT Venting	None Required	Staggered HT Venting	None Required	None Required
Operational Adjustments	None Required	None Required	None Required	Upgraded Combustor from MEVC 100 to MEVC 200	None Required	Put HT back in service	None Required	Put (1) out of service tank back in service	None Required	None Required
IR Camera Inspection Date (Paragraph 18)	2/17/2021	2/17/2021	2/25/2021	2/18/2021	2/25/2021	2/18/2021	2/18/2021	2/25/2021	2/17/2021	2/18/2021
IR Camera Inspection Results (Paragraph 18)	No leaks observed	No leaks observed	No leaks observed	No leaks observed	No leaks observed	No leaks observed	No leaks observed	No leaks observed	No leaks observed	No leaks observed

Note: Modeling adjustements were made to represent the HT vent as a separate stream venting into the control header rather than being directed into the tanks as flash gas along with the HT Liquid dump to tanks.

Although this is certainly what is going on in the field, the initial draft modeling took a more conservative approach and stacked the tank flashing emissions with the HT flash which caused them to compound impacts within a common time interval. After a closer look at the data it appeared this worst case assumption was not necessary given how the Gulfport unit typically operate and therefore the model was adjusted.

The adjusted HT venting was modeled as venting into the Closed Vent Header for 30 second durations every five (5) seconds. 30 seconds represents the longest HP separator dump time observed during field inspections and the 5 second intervals reflects the dump duration intervals predicted on each HP Separator.